EXECUTIVE ORDER U-R-015-0276

New Off-Road

Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-14-012;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR ENGINE FAMILY		DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)		
2015	FFPXL03.4BDC	3.4	Diesel	8000		
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION			
Electronic Module,	Direct Injection, Turboch Exhaust Gas Recirculation Catalyst, Periodic Trap	on, Diesel Oxidation	Loader, Tractor, Dozer, and Other Industrial Equipment			

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED	EMISSION STANDARD		EXHAUST (g/kw-hr)					OPACITY (%)		
CLASS	CATEGORY		НС	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
37 ≤ kW < 56	Tier 4 Final	STD	N/A	N/A	4.7	5.0	0.03	N/A	N/A	N/A
		CERT			4.0	0.4	0.02			

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this \_\_\_

Annette Hebert, Chief

day of May 2014.

Emissions Compliance, Automotive Regulations and Science Division

## **Engine Model Summary Template**

Attachned ps 161

4/21/2014

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
FFPXL03.4BDC	F5HFL464D*E	F5HFL464D*E	74 @ 1800	67	N/A	238 @ 1400	74	N/A	DDI,ECM,TC,EGR,DOC, PTOX
FFPXL03.4BDC	F5HFL464B*E	F5HFL464B*E	74 @ <b>2</b> 500	56	N/A	216 @ 1600	69	N/A	DDI,ECM,TC,EGR,DOC, PTOX
FFPXL03.4BDC	F5DFL464B*E	F5DFL464B*E	74 @ 2500	56	N/A	216 @ 1600	69	N/A	DDI,ECM,TC,EGR,DOC, PTOX
FFPXL03.4BDC	F5DFL464B*E	854F-E34T-3754/2500	74 @ 2500	56	N/A	216 @ 1600	69	N/A	DDI,ECM,TC,EGR,DOC, PTOX
FFPXL03.4BDC	F5DFL464B*E	C3.4B-3754/2500	74 @ 2500	56	N/A	216 @ 1600	69	N/A	DDI,ECM,TC,EGR,DOC, PTOX
FFPXL03.4BDC	F5DFL464A*E	F5DFL464A*E	74 @ 2200	60	N/A	236 @1400	73	N/A	DDI,ECM,TC,EGR,DOC, PTOX
FFPXL03.4BDC	F5HFL464A*E	F5HFL464A*E	74 @ 2200	60	N/A	236 @1400	73	N/A	DDI,ECM,TC,EGR,DOC, PTOX
FFPXL03.4BDC	F5DFL464A*E	854F-E34T-3732/2200	74 @ 2200	60	N/A	236 @1400	73	N/A	DDI,ECM,TC,EGR,DOC, PTOX
FFPXL03.4BDC	F5DFL464A*E	C3.4B-3732/2200	74 @ 2200	60	N/A	236 @1400	73	N/A	DDI,ECM,TC,EGR,DOC, PTOX
FFPXL03.4BDC	F5HFL464C*E	F5HFL464C*E	64 @ 2500	49	N/A	181 @1600	57	N/A	DDI,ECM,TC,EGR,DOC, PTOX
FFPXL03.4BDC	F5DFL464C*E	F5DFL464C*E	64 @ 2500	49	N/A	181 @1600	57	N/A	DDI,ECM,TC,EGR,DOC, PTOX
FFPXL03.4BDC	F5DFL464C*E	854F-E34T-3752/2500	64 @ 2500	49	N/A	181 @1600	57	N/A	DDI,ECM,TC,EGR,DOC, PTOX
FFPXL03.4BDC	F5DFL464C*E	C3.4B-3752/2500	64 @ 2500	. 49	N/A	181 @1600	57	N/A	DDI,ECM,TC,EGR,DOC, PTOX
FFPXL03.4BDC	F5HFL464B*E	854F-E34T-3754/2500	74 @ 2500	56	N/A	216 @ 1600	69	N/A	DDI,ECM,TC,EGR,DOC, PTOX
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